

### **Amendments to the Drawings**

The attached drawing sheets include changes to Figs. 1, 2b, 2d, 2f, 2h, 2j and 3a and replace the original Figs. 1, 2b, 2d, 2f, 2h, 2j and 3a. New drawing Figs. 1b, 1c and 9 have been added. No new matter has been introduced.

The label “KAPPA [bar/g]” has been added to the x-axes of the graphs depicted in Figs. 2b, 2d, 2f, 2h and 2j. Elements Z, AA-1, AA-2 and AA have been deleted from Fig. 3a. Original Fig. 1 has been relabeled “Fig. 1a” and references to new Figs. 1b and 1c have been added to accommodate new Figs. 1b and 1c. New Fig. 1b shows data inputs to step J2 of Fig. 1a; new Fig. 1c shows a step J1a of filtering the brake-application energy reference value. New Fig. 9 is a simplified schematic diagram of a tractor vehicle (and partial view of a trailer vehicle) of a conventional tractor-trailer vehicle combination showing an EBS and including an EBS control unit 10 (which includes the capability of effecting filtering of the brake application energy reference value) and means for determining actual deceleration 20, a brake pedal 30, including a signal transmitter for desired brake values 40, brake actuators 50, 60 for the front and rear axles, respectively, wheel speed sensors 70, 80 and axle load sensors 90, 100.

Attachments: Replacement Sheets (9)

Annotated Marked-Up Drawing Sheets (9)

### **REMARKS**

In view of the foregoing amendments and following remarks, reconsideration of this application and early allowance of the application is respectfully requested.

Claims 1-29 have been examined and are currently pending in this application. Independent claims 1, 25, 28 and 29 and dependent claim 8 have been amended herein.

The Examiner has indicated that all of the application claims as filed (i.e., claims 1-29) contain allowable subject matter in view of the prior art. However, the Examiner has rejected the claims under 35 U.S.C § 112, first and second paragraphs.

As set forth on page 5 of the Office Action, the Examiner rejected independent claims 1, 25, 28 and 29 and dependent claims 2-24, 26 and 27 under 35 U.S.C § 112, first paragraph, as containing subject matter not described in the specification in sufficient detail to enable one skilled in the art to make and/or use the invention. The Examiner contends that the application specification and drawings do not provide an enabling description of the means for measuring an actual deceleration value and the means for determining axle load as variously recited in independent claims 1, 25, 28 and 29, and of the predetermined influencing factors recited in claims 3 and 4.

Applicants respectfully traverse the claim rejections under 35 U.S.C. §112, first paragraph. The enablement requirement is viewed from the vantage point of one of ordinary skill in the art and, accordingly, patent application specifications need only be reasonable with respect to the art involved -- they need not inform the layman nor disclose what the skilled already possess. In re Howarth, 210 USPQ 689, 691-92 (C.C.P.A. 1981). In fact, the MPEP states that it is preferable to omit "that which is well-known to those skilled and already available

to the public.” MPEP § 2164.05(a). Thus, it follows that the present application specification need not describe the details of the means for measuring actual deceleration and the means for determining axle load contemplated for use in accordance with the system and method of the present invention, as such means are conventional.

However, in any event, regarding axle load, the application specification, as filed, particularly paragraph [0040] of the published application, clearly describes the use of axle-load sensors of the tractor vehicle to determine the axle-load ratio (ALV) for the tractor. Also, regarding measuring actual deceleration, the Examiner is referred to paragraph [0004] of the published application.

With respect to the predetermined influencing factors recited in dependent claims 3 and 4, it is submitted that the application is also sufficiently enabling. As set forth in the application specification as filed (see e.g., paragraphs [0015] and [0016] of the published application), the representation of influencing factors as percentages refers to the degree of distribution of braking work to the tractor and trailer vehicles corresponding to control objectives ranging from relatively large equality of adhesion (i.e., of the vehicle wheels to the road) and relatively small similarity of wear (i.e., of the tractor and trailer vehicle brakes) to relatively small equality of adhesion and relatively large similarity of wear.

For the foregoing reasons, Applicants respectfully submit that the application is sufficiently enabling. Notice to this effect and the withdrawal of the rejection of claims 1-29 under 35 U.S.C. § 112, first paragraph, are respectfully solicited.

The Examiner further rejected claims 1-29 under 35 U.S.C § 112, second paragraph, as being indefinite for the reasons set forth on page 6 of the Office Action. It is

respectfully submitted that the Examiner is misreading claims 1, 25, 28 and 29. The claim recitation of “a value” noted in the Office Action does not refer to either the set deceleration value or the brake-application energy level – rather, it refers to a third value that is a function of the brake-application energy reference value. It is also respectfully submitted that the Examiner is misreading claims 11-13; the claim recitation of “said value” refers only to the value “that is a function of said brake-application energy reference value.”

Applicants have amended independent claims 1, 25, 28 and 29 to more clearly recite the foregoing. No new matter has been introduced.

In view of the foregoing, it is submitted that claims 1-29 are sufficiently definite. Notice to this effect, and the withdrawal of the claim rejections under 35 U.S.C. § 112, second paragraph, are earnestly solicited.

Applicants have also amended claim 8 to correct a minor typographical error.

In the Office Action (pages 2-4), the Examiner raised various objections to the application drawings. For the reasons set forth below, Applicants respectfully submit that the drawing figures, as amended herein, are in compliance with 37 CFR 1.83(a) and 1.84(p)(5), and notice to this effect is respectfully requested.

In the Office Action, the Examiner first objected to the drawings as not showing (i) the axle load sensors (or the means for determining axle load) as recited in claim 17, (ii) the vehicle dynamics data (including engine power and transmission ratio) as recited in claim 23, (iii) the means for enabling the filtering of the brake application energy reference value as recited in claim 24, (iv) the means for measuring actual deceleration as recited in claim 28, (v) the electronic braking system recited in claim 1, and (vi) the elements recited in claim 5. The

Examiner required that the foregoing features either be shown in the drawing figures or deleted from the claims.

To address the Examiner's concerns and promote the application to early allowance, as depicted in the attached Replacement Sheets and Annotated Marked-Up Drawing Sheets, Applicants have added new Fig. 9 to the drawings which is a simplified schematic diagram of a tractor vehicle (and partial view of a trailer vehicle) of a conventional tractor-trailer vehicle combination showing an EBS and including an EBS control unit 10 (which includes the capability of effecting filtering of the brake application energy reference value) and means for determining actual deceleration 20, a brake pedal 30, including a signal transmitter for desired brake values 40, brake actuators 50, 60 for the front and rear axles, respectively, wheel speed sensors 70, 80 and axle load sensors 90, 100. As these elements are conventional, they are shown as "black box" labeled representations.

Support for the addition of new Fig. 9 resides in at least the claims noted by the Examiner in the drawing objection. Accordingly, no new matter has been introduced.

Regarding the vehicle dynamics data, as depicted in the attached Replacement Sheets and Annotated Marked-Up Drawing Sheets, Applicants have added Fig. 1b which shows such data as well as vehicle combination mass as possible inputs to step J2 of Fig. 1. Applicants have also added Fig. 1c which shows a step J1a of filtering the brake-application energy reference value. Fig. 1 has been relabeled "Fig. 1a" to accommodate the addition of Fig. 1b as well as Fig. 1c.

Support for the foregoing resides in at least the claims noted by the Examiner in the drawing objection (see also paragraph [0037] of the published application with respect to the filtering step). Accordingly, no new matter has been introduced.

Regarding the elements recited in claim 5, the Examiner is referred to Figs. 2a and 2b (also paragraph [0042] of the published application).

Applicants have made appropriate conforming amendments to the application specification in view of the drawing amendments discussed above. No new matter has been introduced.

The Examiner further objected to the drawings because the x-axes of the graphs depicted in Figs. 2b, 2d, 2f, 2h and 2j are not separately labeled. As depicted in the attached Replacement Sheets and Annotated Marked-Up Drawing Sheets, Applicants have added the label “KAPPA [bar/g]” to each of these graphs.

In view of the foregoing, Applicants respectfully submit that the drawings as amended are in compliance with 37 CFR 1.83(a). Notice to this effect is respectfully requested.

Applicants do not understand, and accordingly respectfully request that the Examiner clarify, the objection to the relationship depicted in block J5 of Fig. 1. As set forth in the application specification as filed (see paragraph [0035] of the published application, for example), this equation describes how the set brake-application energy value P-set-A can be calculated from the mathematical relationship  $BDN-A \cdot Z_{set} \cdot (\kappa/\kappa_{old})$ . Applicants respectfully submit that the equation speaks for itself.

The Examiner also objected to Fig. 3a in its inclusion of elements A, Z, AA-1, AA-2 and AA. As depicted in the attached Replacement Sheets and Annotated Marked-Up

Drawing Sheets, Applicants have deleted elements Z, AA-1, AA-2 and AA from the drawings. Regarding element A, Applicants respectfully note that the application specification clearly refers to this element as representing the trailer vehicle (see paragraph [0035] of the published application).

The Examiner additionally objected to Figs. 3a-3e, 4a-4c, 5a-5i, 6a-6e and 7a-7e of the drawings in their inclusion of “unlabeled numbers.” Applicants note that the position of each number in the various arrays of numbers set forth in the drawings below the depictions of the tractor-trailer vehicle indicates the value for which each number stands (whether axle load or KAPPA or other value). Applicants respectfully submit that the numbers are clearly labeled by their position throughout the drawings as a whole (see e.g., Figs. 3b, 3e, 4a and 5c), and that, accordingly, when the drawings are considered as a whole, there are, for all intents and purposes, no “unlabeled numbers.” Furthermore, the values associated with the various specific numbers are discussed throughout the application specification as filed. For example, the Examiner is referred to paragraphs [0044] and [0047] of the published application.

In view of the foregoing, Applicants respectfully submit that Figs. 3a-3e, 4a-4c, 5a-5i, 6a-6e and 7a-7e of the drawings are in compliance with 37 CFR 1.84(p)(5). Notice to this effect is respectfully requested.

The submission of formal drawings incorporating the drawing amendments set forth herein will be deferred until allowance of the application.

In addition, the Examiner raised objections to the application specification for the reasons set forth on pages 4-5 of the Office Action. Applicants have amended the application specification to affirmatively recite the noted terms from the claims. No new matter has been

introduced. Applicants note that “affine” equations generally relate to transformations, such as rotations or expansions, that carry parallel lines into parallel lines but may change the distances between points.

In view of the foregoing, Applicants respectfully submit that the application specification as amended provides sufficient antecedent basis for the claimed subject matter. Notice to this effect is earnestly solicited.

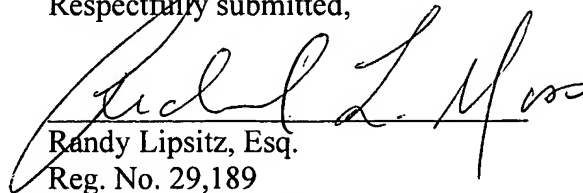
The references cited by the Examiner in the Office Action but not applied are believed to be merely of interest, and no further discussion of the references is deemed necessary or appropriate at this time.

On the basis of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for immediate allowance, and notice to this effect is respectfully requested.

The Examiner is invited to contact Applicants’ undersigned attorneys at the telephone number set forth below if it will advance the prosecution of this case.

No fee is believed due with this Response. Please charge any fee deficiency to Deposit Account No. 50-0540.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Randy Lipsitz", is written over a horizontal line.

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FIG. 1a

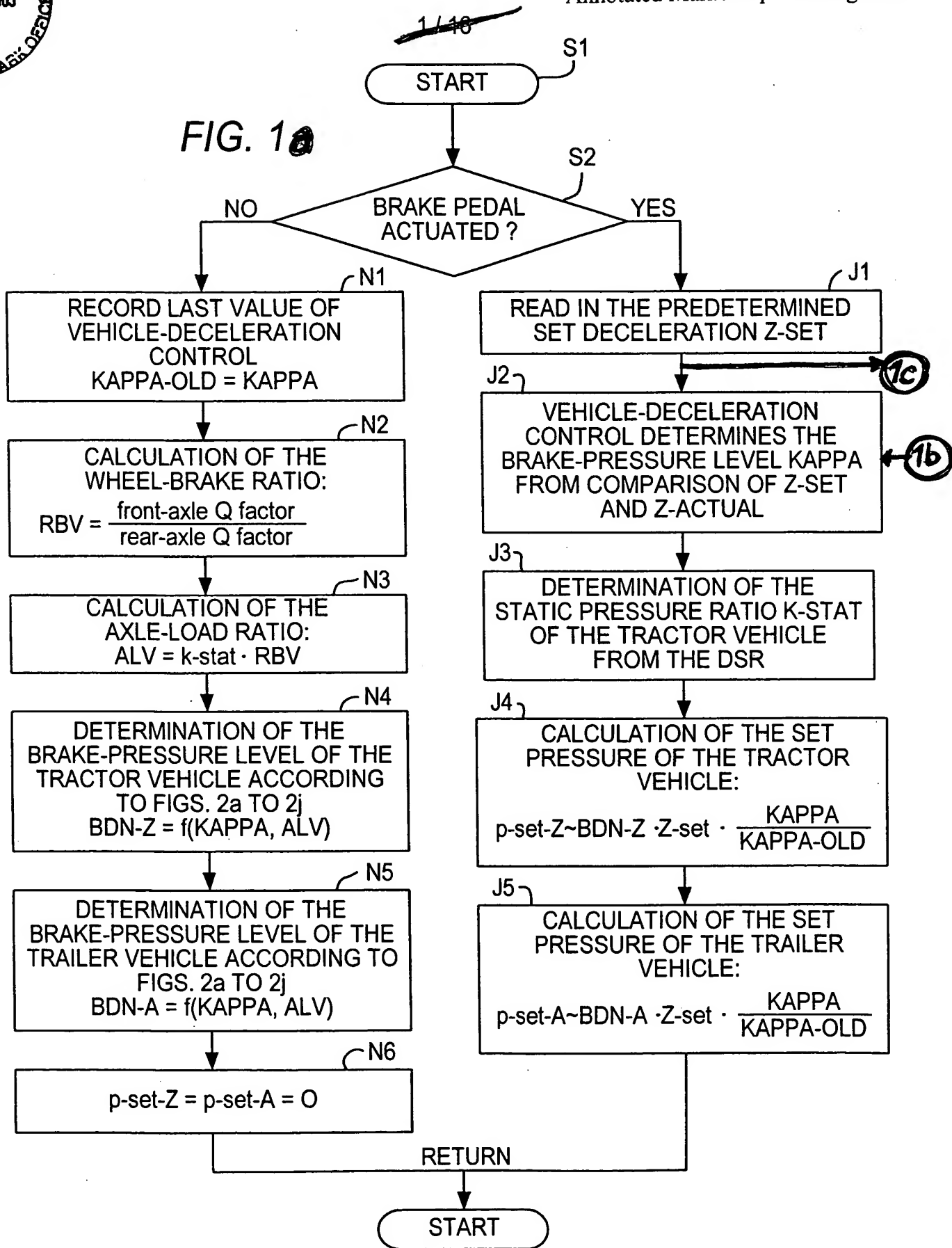


FIG. 1b

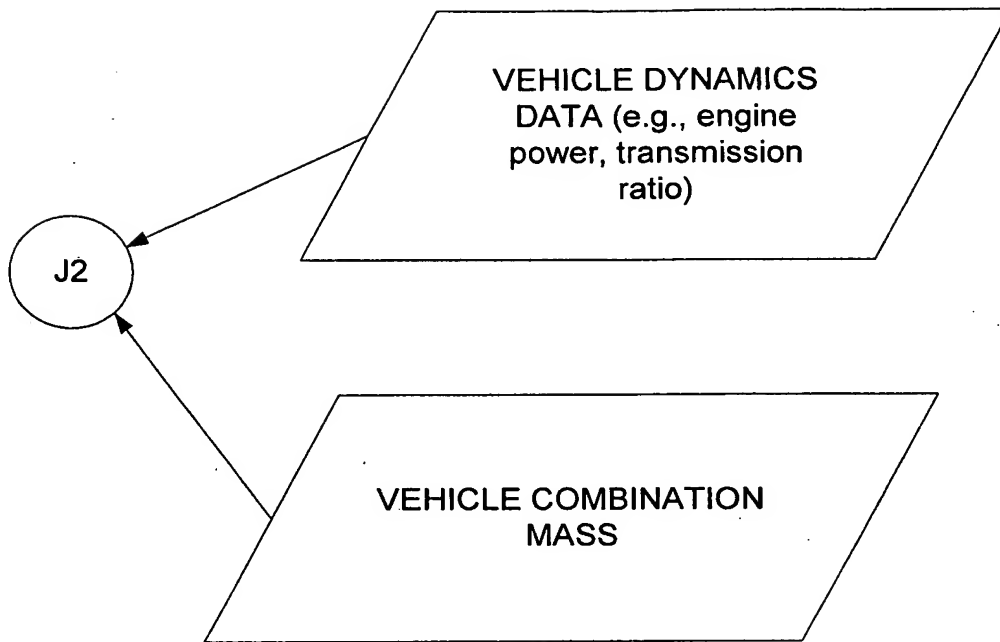
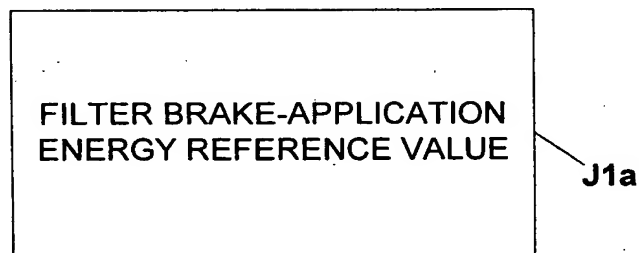


FIG. 1c



New  
Figure  
Added

~~2/16~~

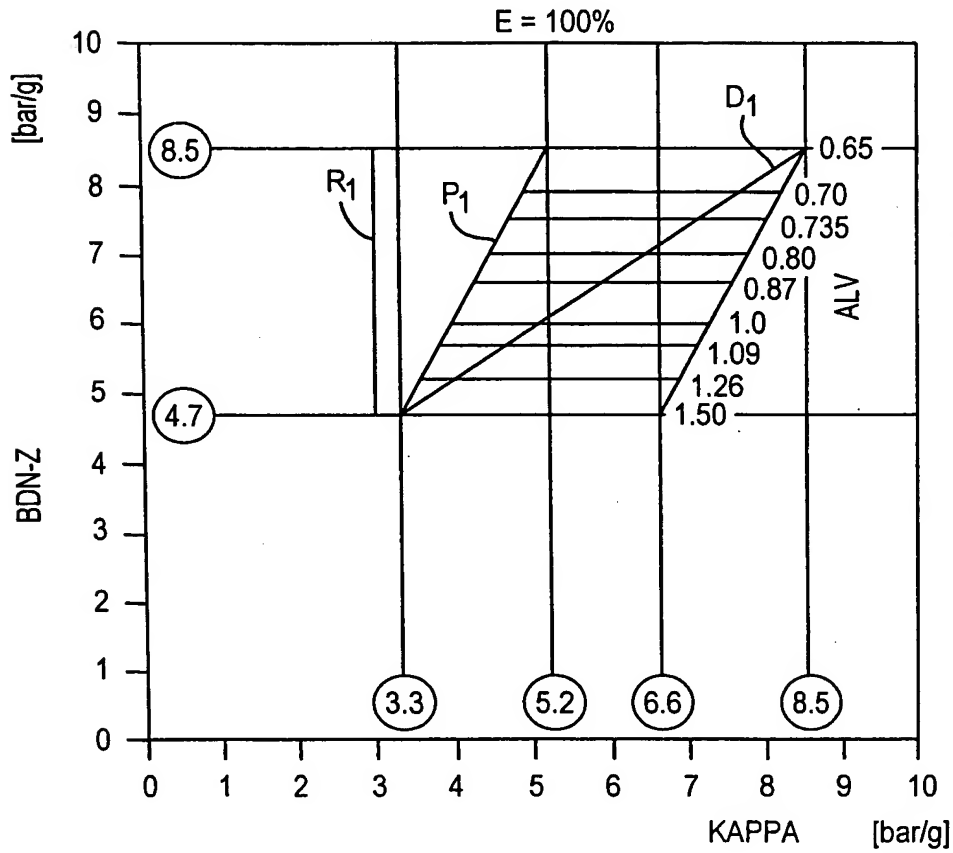


FIG. 2a

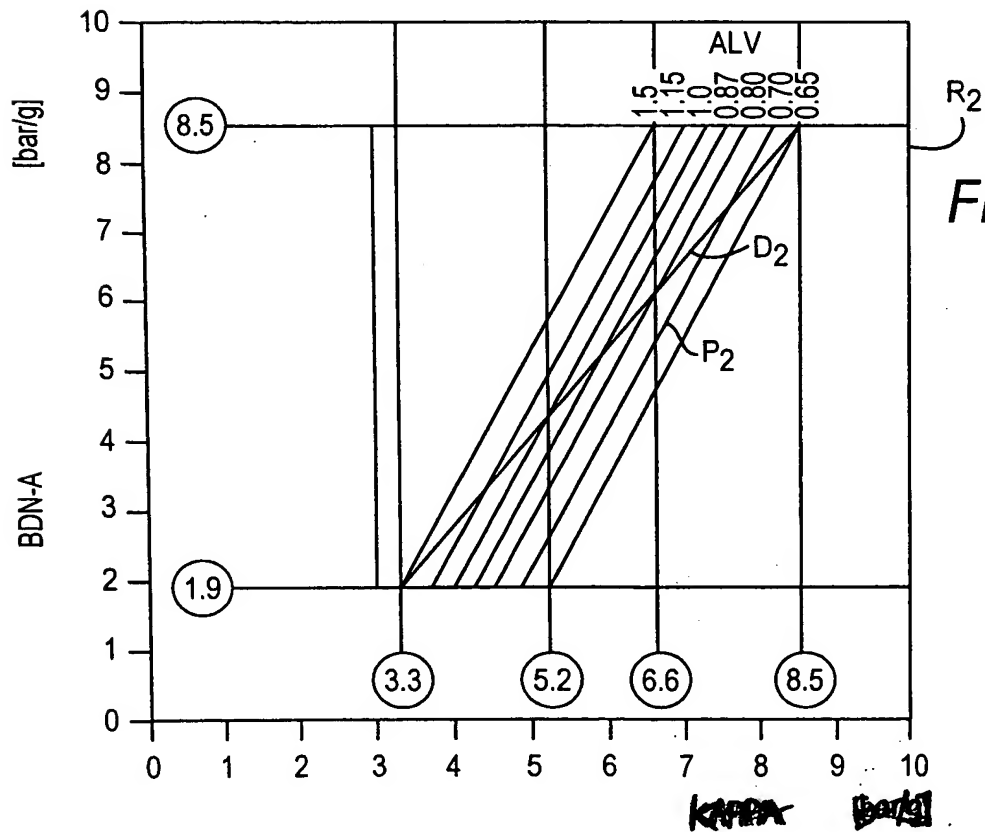


FIG. 2b

~~3/16~~  
E = 75%

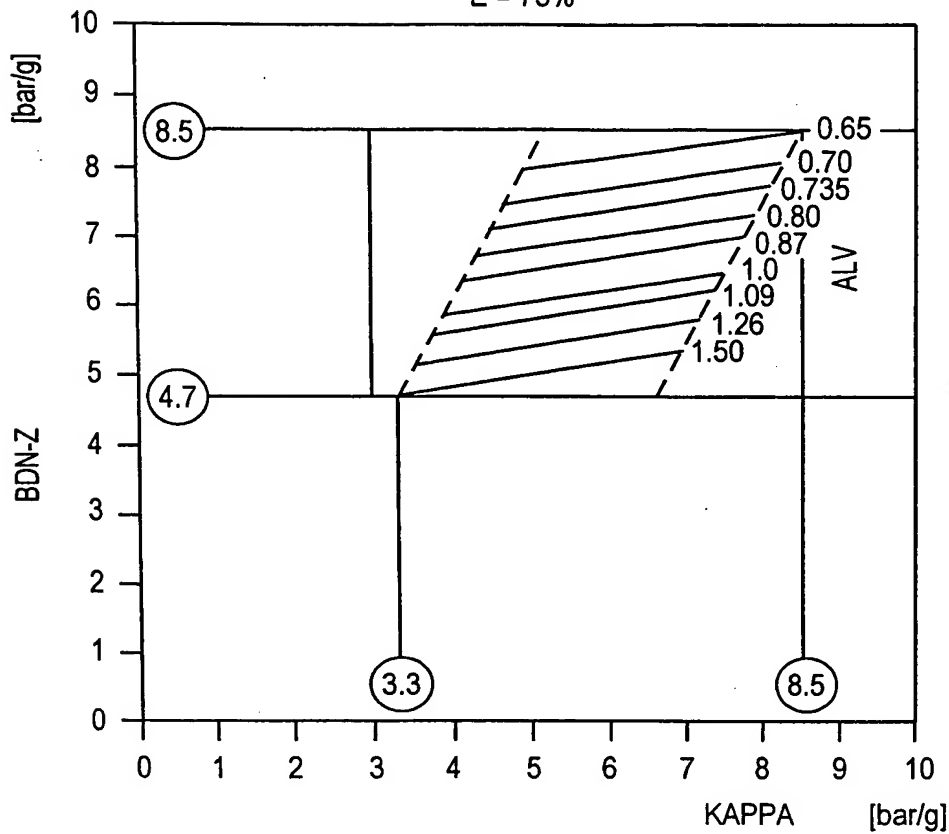


FIG. 2c

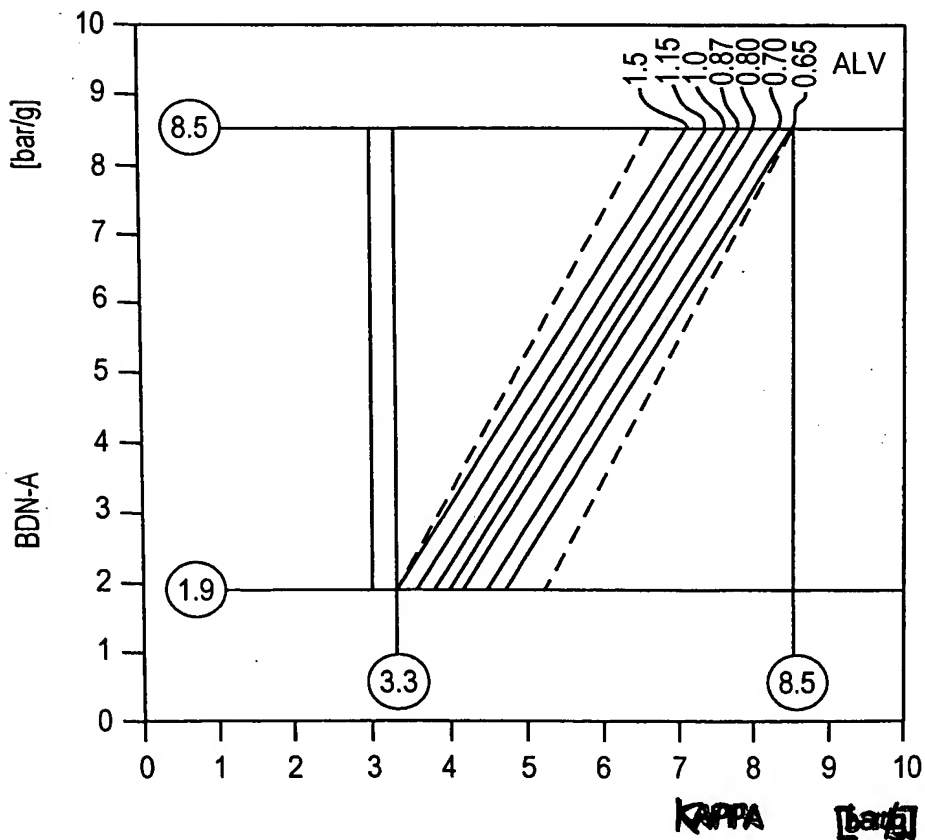
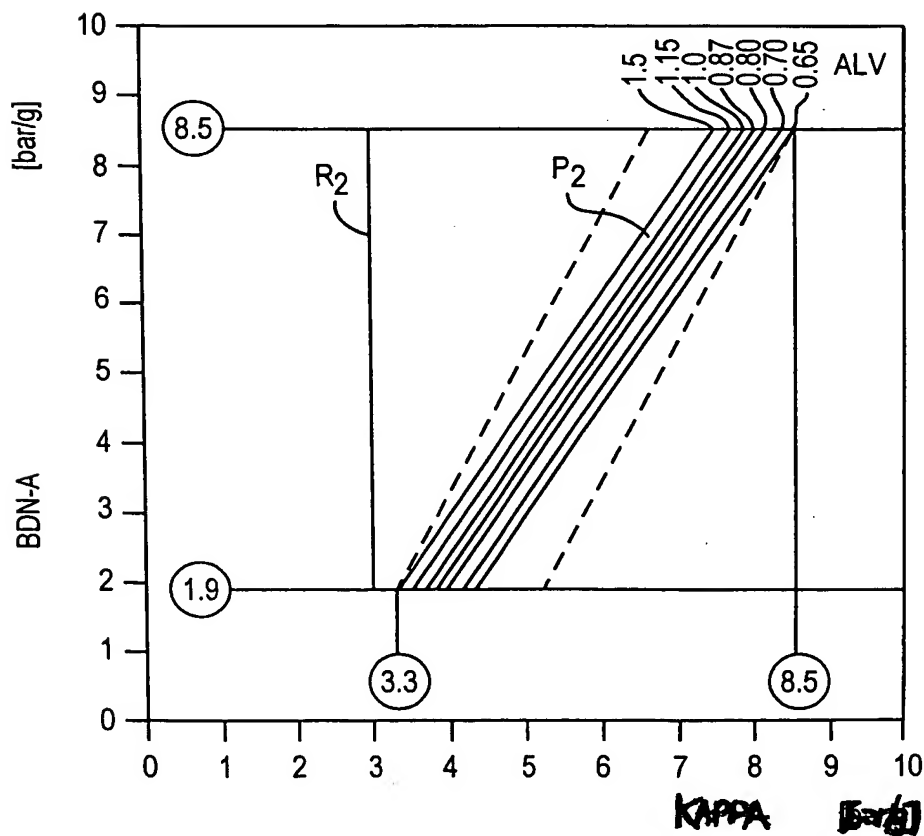
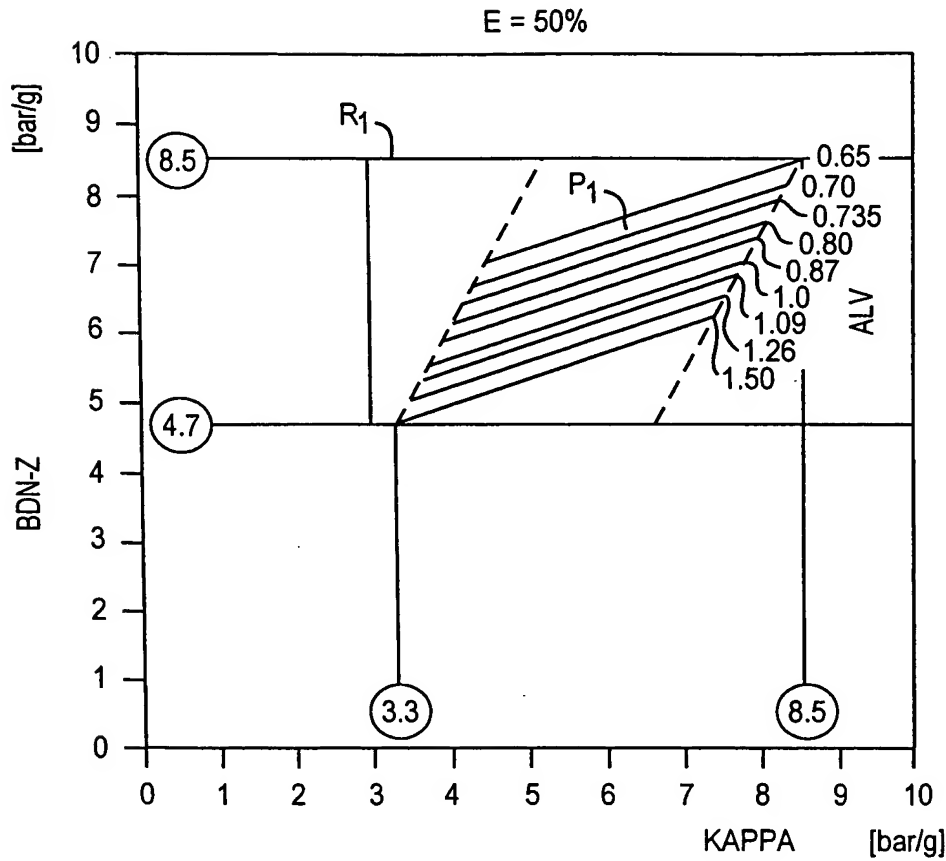


FIG. 2d

~~47/16~~



~~5/16~~

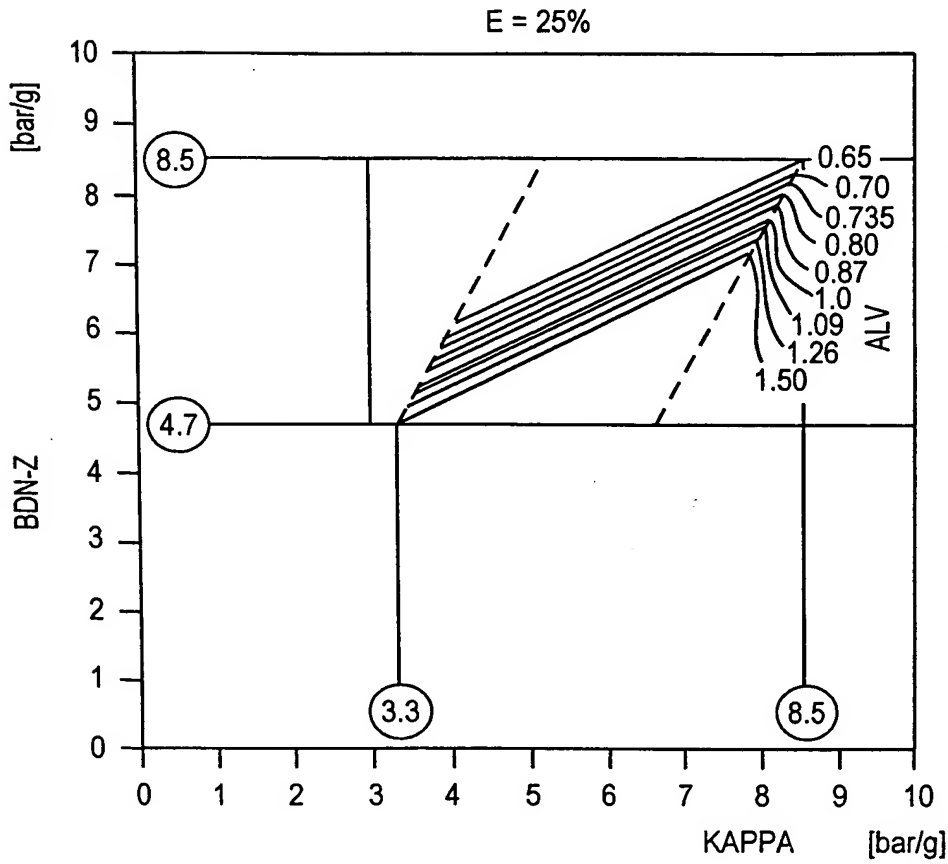


FIG. 2g

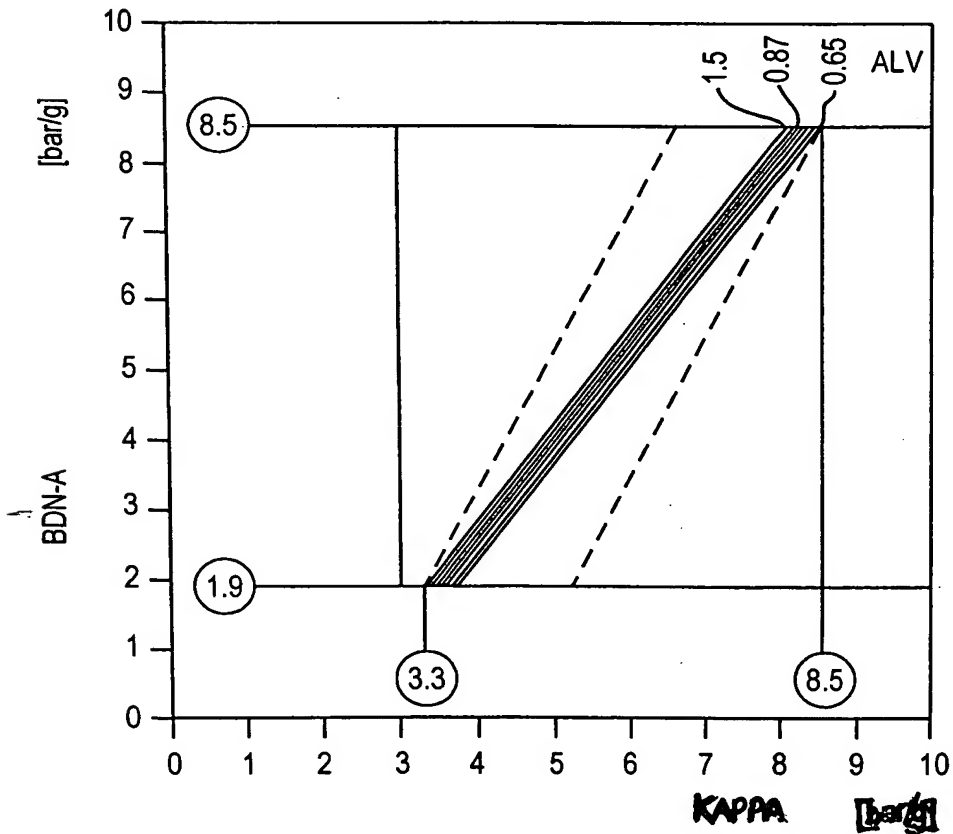


FIG. 2h

~~6/10~~

E = 0%

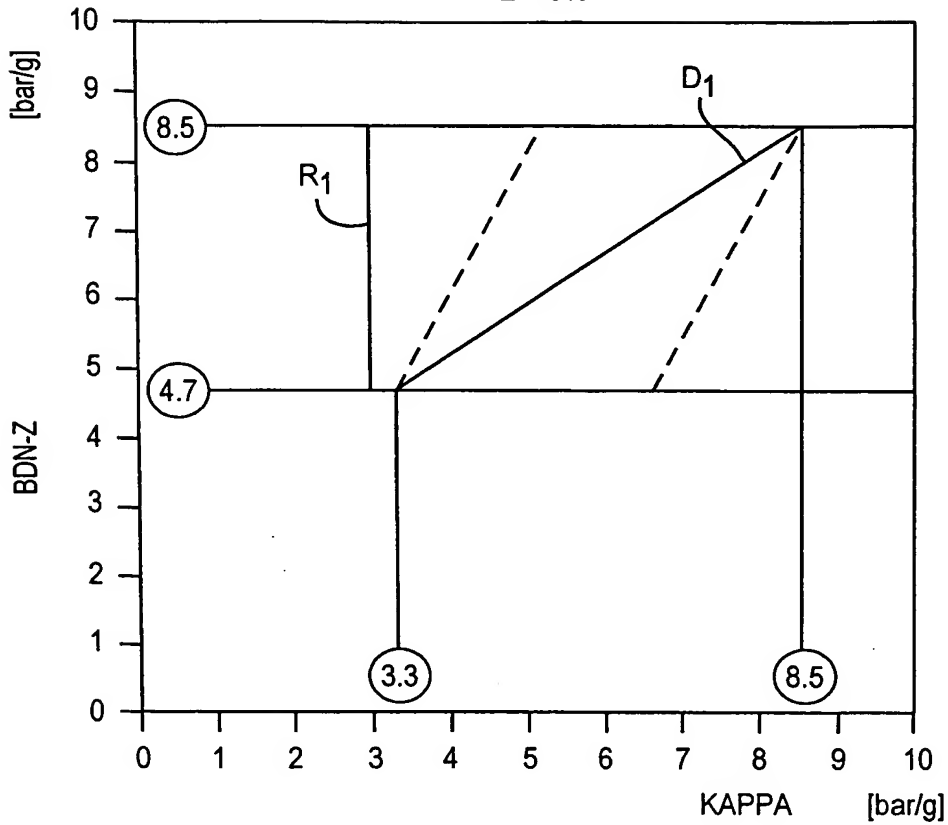


FIG. 2i

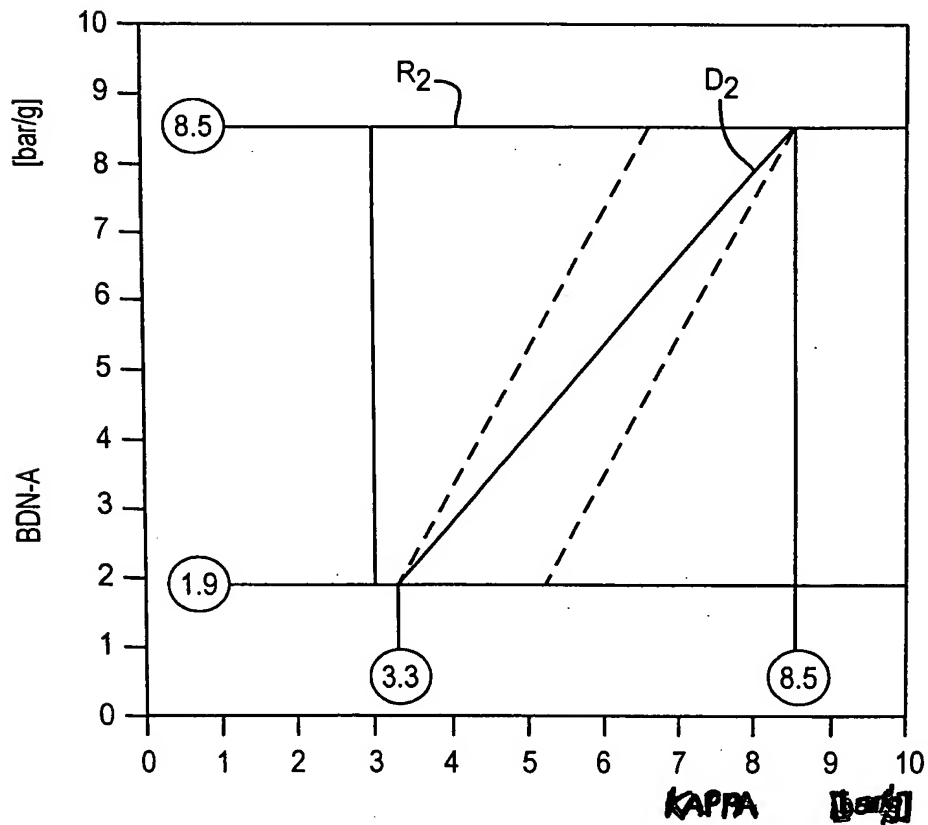
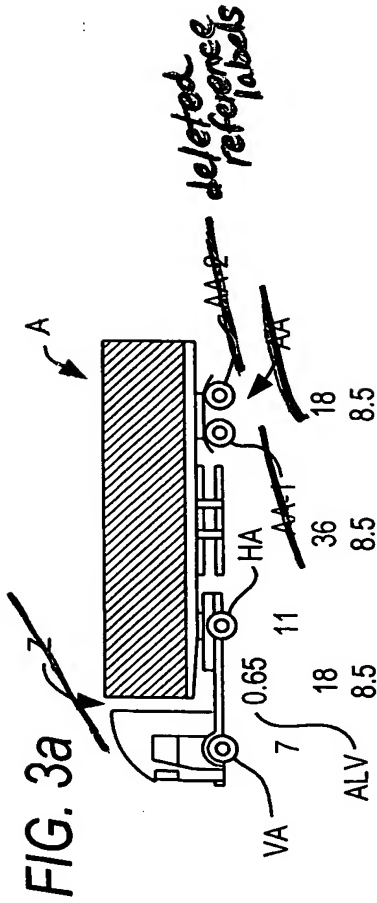
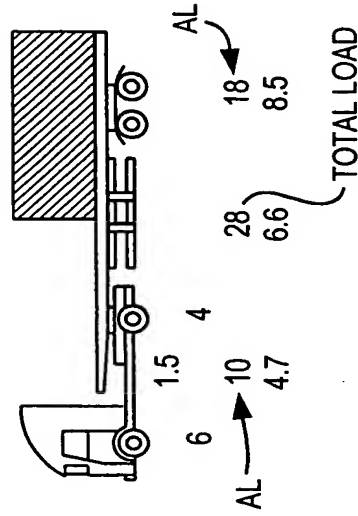


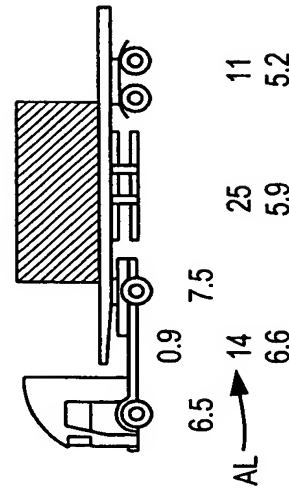
FIG. 2j



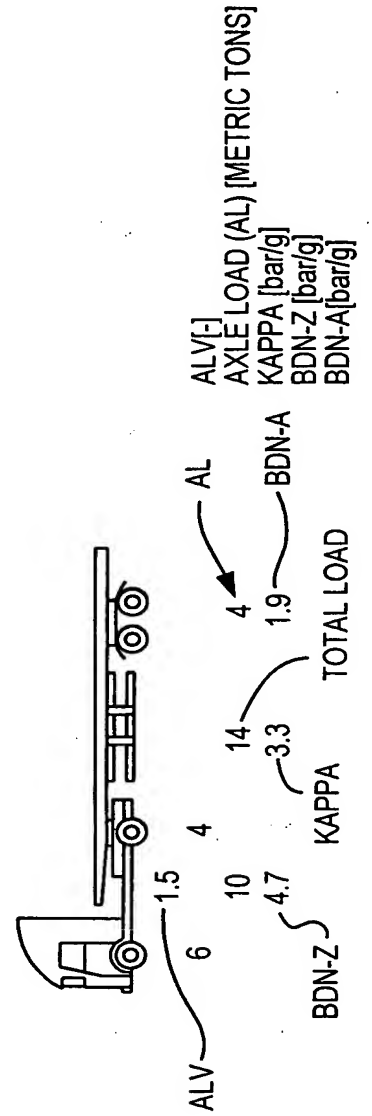
**FIG. 3d**



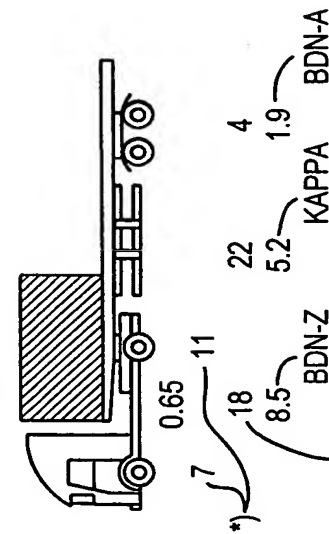
**FIG. 3c**



**FIG. 3e**



**FIG. 3b**



\*) INDIVIDUAL AXLE LOAD



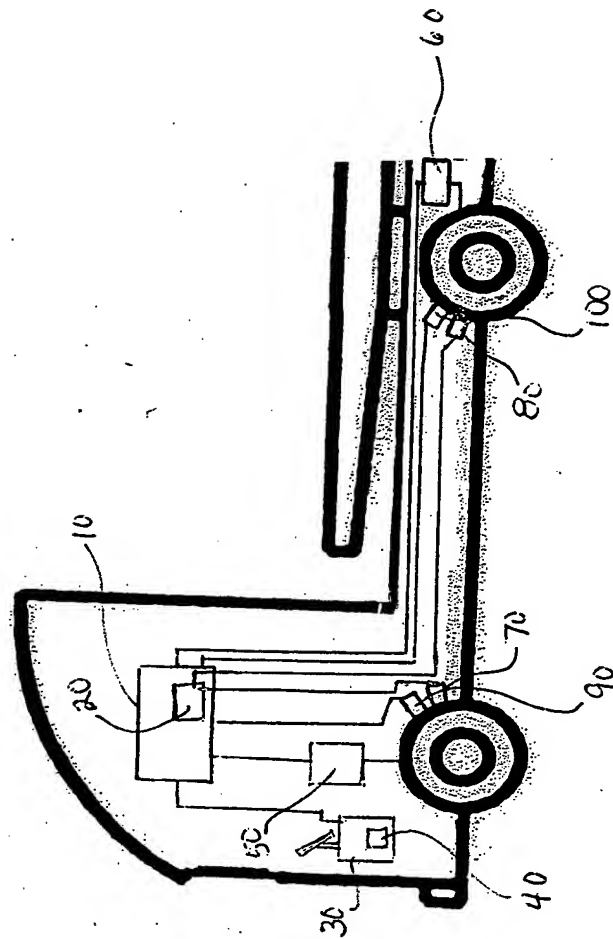


FIG. 9

PRIOR ART

New  
Figure  
Added